		Aeronautics Educa	ator Guide	
2009 Mathematics				
		Core Curricu	llum	
Iowa Mathematics				
Grades K-2		24		
Activity/Lesson	State	Standards		
			Identify attributes that are measurable such as	
			length, volume, weight, and area. Use these	
			attributes and appropriate language to make	
			direct comparisons. (Taller, shorter, longer, same	
			length; heavier, lighter, same weight; holds	
Air Engines (12-16)	IA	MA.K-2.4.1.1	more, holds less, holds the same amount).	
/gcc ( c)			Use a seriated set of objects to order and	
Air Engines (12-16)	IA	MA.K-2.4.1.3	compare lengths.	
7 iii 211gii100 (12 10)	" \	100 1111 2111110	Recognize that objects used to measure an	
			attribute (length, weight, capacity) must have	
Air Engines (12-16)	IA	MA.K-2.4.1.4	that attribute and must be consistent in size.	
7 til Eliginos (12 10)		100 0.10 2.11.11.1	that attribute and made 50 denoicement of 520.	
			Select appropriate measurement tools and units	
Air Engines (12-16)	IA	MA.K-2.4.2.1	(standard and non-standard) to solve problems.	
7 til Eligines (12 10)	17 (	1017 (.17 2.7.2.1	Use a variety of non-standard units to measure	
Air Engines (12-16)	IA	MA.K-2.4.3.2	length without gaps or overlaps.	
All Linglines (12-10)		IVIA.IX-2.4.3.2	length without gaps of overlaps.	
			Select appropriate measurement tools and units	
Air Engines (12-16)	IA	MA.K-2.4.3.8	(standard and non-standard) to solve problems.	
All Linglines (12-10)		IVIA.IX-2.4.3.0	Recognize that objects used to measure an	
			attribute (length, weight, capacity) must have	
Rotor Motor (69-75)	IA	MA.K-2.4.1.4	that attribute and must be consistent in size.	
1000 1000 (03-73)		IVI/\\\-\Z.\\-\.\.\\	Collect, organize, represent, and interpret data	
			in bar-type graphs, picture graphs, frequency	
Rotor Motor (69-75)	IA	MA.K-2.5.1.2	tables, and line plots.	
TOTOL MOTOL (03-13)		IVI/1.11-2.5.1.2	Represent a collection of data using tallies,	
Rotor Motor (69-75)	IA	MA.K-2.5.2.1	tables, picture graphs and bar graphs.	
TOTOL WOLD (05-15)		IVI/1.11-2.5.2.1	tables, picture graphs and bar graphs.	
Flight: Interdisciplinary				
Learning Activities (76-			Count, represent, read, compare, order, and	
79)	IA	MA.K-2.1.1.1	conserve whole numbers up to 1000.	
19)		IVI/\\\-\Z.1.1.1	conserve whole numbers up to 1000.	
Flight: Interdisciplinary			Count by tens or hundreds, forwards and	
Learning Activities (76-			backwards, starting at any number from 1 to	
79)	IA	MA.K-2.1.1.3	1000.	
,		IVI/ 1.11-Z. 1.1.U	1000.	
Flight: Interdisciplinary				
Learning Activities (76-			Collect and organize data in lists, tables, and	
79)	IA	MA.K-2.5.1.1	simple graphs.	
10)	II X	IVI/1.IX-Z.J. 1. I	Simple graphs.	
Flight: Interdisciplinary				
Learning Activities (76-			Compare a single data set using different types	
79)	IA	MA.K-2.5.2.2	of graphs.	
,	111 1	IVI/\I\-Z.J.Z.Z	or grupno.	

Flight: Interdisciplinary			Use information from data to make observations
Learning Activities (76-			and inferences, draw conclusions, and make
79)	IA	MA.K-2.5.3.5	predictions.
Where is North? The		IVIA.IX-2.3.3.3	Use information from data to make observations
			and inferences, draw conclusions, and make
Compass Can Tell Us	1.0	MAKAFAF	,
(87-90)	IA	MA.K-2.5.3.5	predictions.
			Recognize that objects used to measure an
Let's Build a Table Top			attribute (length, weight, capacity) must have
Airport (91-96)	IA	MA.K-2.4.1.4	that attribute and must be consistent in size.
			Represent points and simple figures on maps
Plan to Fly There (97-			using simple coordinate grids with letters and
106)	IA	MA.K-2.3.4.3	numbers.
Plan to Fly There (97-			
106)	IA	MA.K-2.4.3.4	Associate the time of day with everyday events.
Plan to Fly There (97-			
106)	IA	MA.K-2.4.3.5	Name standard units of time (day, week, month).
			Describe the relationship among standard units
Plan to Fly There (97-			of time: minutes, hours days, weeks, months
106)	IA	MA.K-2.4.3.10	and years.
We Can Fly, You and			, , , , , , , , , , , , , , , , , , ,
I: Interdisciplinary			
Learning (107-108)	IA	MA.K-2.4.3.4	Associate the time of day with everyday events.
We Can Fly, You and	,,,	100 010 2111011	here and the time of day man everyday evente.
I: Interdisciplinary			
Learning (107-108)	IA	MA.K-2.4.3.5	Name standard units of time (day, week, month).
We Can Fly, You and		10171.11 2.4.5.5	Describe the relationship among standard units
I: Interdisciplinary			of time: minutes, hours days, weeks, months
Learning (107-108)	IA	MA.K-2.4.3.10	and years.
	IA .	IVIA.IX-2.4.3.10	and years.
We Can Fly, You and			Callest and arranize data in lists, tables, and
I: Interdisciplinary	1.0	MA K O E 4 4	Collect and organize data in lists, tables, and
Learning (107-108)	IA	MA.K-2.5.1.1	simple graphs.
Devide d Nambia (47			Use interviews, surveys, and observations to
Dunked Napkin (17-		NAA 14 0 5 4 0	collect data that answers questions about
22)	IA	MA.K-2.5.1.3	themselves and their surroundings.
			Use information from data to make observations
Dunked Napkin (17-			and inferences, draw conclusions, and make
22)	IA	MA.K-2.5.3.5	predictions.
			Identify, name, sort, and describe two- and three-
			dimensional shapes (including circles, triangles,
			rectangles, squares, cubes, and spheres), and
Paper Bag Mask (23-			real-world approximations of the shapes,
28)	IA	MA.K-2.3.1.1	regardless of size or orientation.
			Describe characteristics of two- and three-
Paper Bag Mask (23-			dimensional objects (number of corners, edges,
28)	IA	MA.K-2.3.3.1	and sides, length of sides, etc.).
,			, , , , , , , , , , , , , , , , , , , ,
			Identify attributes that are measurable such as
			length, volume, weight, and area. Use these
			attributes and appropriate language to make
			direct comparisons. (Taller, shorter, longer, same
Paper Bag Mask (23-			length; heavier, lighter, same weight; holds
28)	IA	MA.K-2.4.1.1	more, holds less, holds the same amount).
20)	IIV	IVI/1.1\-Z.4.1.1	more, noids iess, noids the same amount).

			Recognize that objects used to measure an
Paper Bag Mask (23-			attribute (length, weight, capacity) must have
28)	IA	MA.K-2.4.1.4	that attribute and must be consistent in size.
			and distribute and made so consistent in size.
Paper Bag Mask (23-			Select appropriate measurement tools and units
28)	IA	MA.K-2.4.2.1	(standard and non-standard) to solve problems.
Paper Bag Mask (23-	,,,		Use a variety of non-standard units to measure
28)	IA	MA.K-2.4.3.2	length without gaps or overlaps.
Paper Bag Mask (23-	,, ·	107 (11 2. 1.0.2	Estimate and measure length using metric and
28)	IA	MA.K-2.4.3.7	customary units.
20)	,, <u>, , , , , , , , , , , , , , , , , ,</u>	1017 (11 ( 2: 1:0:7	outernary arme.
Paper Bag Mask (23-			Select appropriate measurement tools and units
28)	IA	MA.K-2.4.3.8	(standard and non-standard) to solve problems.
/			Use information from data to make observations
Paper Bag Mask (23-			and inferences, draw conclusions, and make
28)	IA	MA.K-2.5.3.5	predictions.
			production.
			Use commutative and associative properties
			and mathematical reasoning to solve a variety of
Wind in Your Socks)			addition and subtraction problems involving two
(29-35)	IA	MA.K-2.2.3.3	or more one-digit numbers; justify the solution.
			and the second s
			Identify attributes that are measurable such as
			length, volume, weight, and area. Use these
			attributes and appropriate language to make
			direct comparisons. (Taller, shorter, longer, same
Wind in Your Socks)			length; heavier, lighter, same weight; holds
(29-35)	IA	MA.K-2.4.1.1	more, holds less, holds the same amount).
			Recognize that objects used to measure an
Wind in Your Socks)			attribute (length, weight, capacity) must have
(29-35)	IA	MA.K-2.4.1.4	that attribute and must be consistent in size.
Wind in Your Socks)			Select appropriate measurement tools and units
(29-35)	IA	MA.K-2.4.2.1	(standard and non-standard) to solve problems.
Wind in Your Socks)			Use a variety of non-standard units to measure
(29-35)	IA	MA.K-2.4.3.2	length without gaps or overlaps.
Wind in Your Socks)			Estimate and measure length using metric and
(29-35)	IA	MA.K-2.4.3.7	customary units.
Wind in Your Socks)			Select appropriate measurement tools and units
(29-35)	IA	MA.K-2.4.3.8	(standard and non-standard) to solve problems.
Wind in Your Socks)			Collect and organize data in lists, tables, and
(29-35)	IA	MA.K-2.5.1.1	simple graphs.
			Use information from data to make observations
Wind in Your Socks)			and inferences, draw conclusions, and make
(29-35)	IA	MA.K-2.5.3.5	predictions.
			Identify attributes that are measurable such as
			length, volume, weight, and area. Use these
			attributes and appropriate language to make
Air: Interdisciplinary			direct comparisons. (Taller, shorter, longer, same
Learning Activities (36-	-		length; heavier, lighter, same weight; holds
39)	IA	MA.K-2.4.1.1	more, holds less, holds the same amount).

-		Use their understanding of whole numbers, fractions, and decimals to construct and analyze
	IVIA.3-0.4.3.4	nature of the data set.
10	MA 2 5 4 2 4	Design investigations to address a question and consider how data collection methods affect the
IA	MA.3-5.4.1.4	Use their understanding of whole numbers, fractions, and decimals to construct and analyze circle graphs and line graphs.
IA	MA.3-5.3.6.5	and tools to solve problems that involve estimating and measuring weight, time and temperature.
IA	MA.3-5.3.6.1	Select appropriate units, strategies, and tools to solve problems that involve estimating and measuring perimeter, area and volume.  Select and apply appropriate units, strategies
State	Standards	Salast appropriate units strategies and tools to
IA		predictions.
	144 14 2 7 2 7	Use information from data to make observations and inferences, draw conclusions, and make
	MA.K-2.4.1.4	Recognize that objects used to measure an attribute (length, weight, capacity) must have that attribute and must be consistent in size.
IA	MA.K-2.4.1.1	length, volume, weight, and area. Use these attributes and appropriate language to make direct comparisons. (Taller, shorter, longer, same length; heavier, lighter, same weight; holds more, holds less, holds the same amount).
IA .	MA.K-2.5.3.5	Identify attributes that are measurable such as
IA	MA.K-2.4.1.4	that attribute and must be consistent in size.  Use information from data to make observations and inferences, draw conclusions, and make
		Recognize that objects used to measure an attribute (length, weight, capacity) must have
IΔ	MΔ K-2 4 1 1	Identify attributes that are measurable such as length, volume, weight, and area. Use these attributes and appropriate language to make direct comparisons. (Taller, shorter, longer, same length; heavier, lighter, same weight; holds more, holds less, holds the same amount).
IA	MA.K-2.4.1.4	Recognize that objects used to measure an attribute (length, weight, capacity) must have that attribute and must be consistent in size.
	IA	IA MA.K-2.4.1.1  IA MA.K-2.4.1.4  IA MA.K-2.5.3.5  IA MA.K-2.4.1.4  IA MA.K-2.5.3.5  Aeronautics Educa 2009 Mathema Core Curricu  State Standards  IA MA.3-5.3.6.1  IA MA.3-5.3.6.5  IA MA.3-5.4.1.4

Where is North? The			Design investigations to address a question and
			Design investigations to address a question and consider how data collection methods affect the
Compass Can Tell Us	1.0	MA 2 E 4 2 4	
(87-90)	IA	MA.3-5.4.3.4	nature of the data set.
			Select and apply appropriate units, strategies
Lada Dada a Tabla Tab			and tools to solve problems that involve
Let's Build a Table Top			estimating and measuring weight, time and
Airport (91-96)	IA	MA.3-5.3.6.5	temperature.
			Select and apply appropriate units, strategies
D E. T			and tools to solve problems that involve
Plan to Fly There (97-			estimating and measuring weight, time and
106)	IA	MA.3-5.3.6.5	temperature.
			Select and apply appropriate units, strategies
We Can Fly, You and			and tools to solve problems that involve
I: Interdisciplinary			estimating and measuring weight, time and
Learning (107-108)	IA	MA.3-5.3.6.5	temperature.
l <u> </u>			
We Can Fly, You and			Compare different representations of the same
I: Interdisciplinary			data and evaluate how well each representation
Learning (107-108)	IA	MA.3-5.4.1.3	shows important aspects of the data.
			Compare different representations of the same
Dunked Napkin (17-			data and evaluate how well each representation
22)	IA	MA.3-5.4.1.3	shows important aspects of the data.
			Learn how to describe data, make a prediction
Dunked Napkin (17-			to describe the data, and then justify their
22)	IA	MA.3-5.4.3.1	predictions.
			Learn to collect data using observations,
Dunked Napkin (17-			surveys and experiments and propose
22)	IA	MA.3-5.4.3.2	conjectures.
			Design investigations to address a question and
Dunked Napkin (17-			consider how data collection methods affect the
22)	IA	MA.3-5.4.3.4	nature of the data set.
			Understand attributes and properties of two-
			dimensional space through building, drawing
			and analyzing two-dimensional shapes and use
			the attributes and properties to solve problems,
Paper Bag Mask (23-			including applications involving congruence and
28)	IA	MA.3-5.3.2.1	symmetry.
			Develop measurement concepts and skills
			through experiences in analyzing attributes and
Paper Bag Mask (23-			properties of two- and three-dimensional
28)	IA	MA.3-5.3.5.1	objects.
			Select appropriate units, strategies, and tools to
Paper Bag Mask (23-			solve problems that involve estimating and
28)	IA	MA.3-5.3.6.1	measuring perimeter, area and volume.
Paper Bag Mask (23-			Develop facility in measuring with fractional
28)	IA	MA.3-5.3.6.2	parts of linear units.
			Select and apply appropriate units, strategies
			and tools to solve problems that involve
Paper Bag Mask (23-			estimating and measuring weight, time and
28)	IA	MA.3-5.3.6.5	temperature.

Wind in Your Socks) (29-35)	IA	MA.3-5.4.3.4	Design investigations to address a question an consider how data collection methods affect the nature of the data set.
Wind in Your Socks) (29-35)	IA	MA.3-5.4.5.2	Learn to estimate the probability of events as certain, equally likely or impossible by designing simple experiments to collect data and draw conclusions.
Bag Balloons (40-43)	IA	MA.3-5.4.3.4	Design investigations to address a question ar consider how data collection methods affect the nature of the data set.